**Diedra Reuman**

**4.4 Transformations Using Matrices**

**Daily Lesson Topic:** Transformations Using Matrices

**Unit:** Matrices

**Standards:** N-VM.12 Work with 2 × 2 matrices as transformations of the plane.

**Goals:** SWBAT rotate, reflect, and translate points on a coordinate plane from a matrix.

**Daily Objectives:** SW translate a matrix by graphing.

SW reflect and rotate figures to find matrices.

SW multiply matrices to verify transformations.

**Instructional strategy:** Discovery.

**Modification/accommodation:** Group work will help those who are having trouble thinking critically about the multiplication.

**Materials:** graph paper, worksheet

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| Time:  4 min | **Introduction:**  *How can I activate Prior knowledge?*  The teacher will refer to how to multiple and add matrices for students to use transformations. (SB)   * Go through first slides |  |
| Time:  10 min | **Instruction:**  The teacher will work with the students and demonstrate how to transform the matrix. (SB)  The teacher will tell the students that reflection and rotation require matrix multiplication.  The teacher will instruct the students how to fold and label their graph paper.   * Hot dog, then hamburger fold   The teacher will work through the first example with students.  The teacher will graph the first example.  The teacher will multiply the second matrices to see if there is a pattern.  The teacher will explain the directs for the assignment after practice. |  |
| Time:  31 min | **Practice:**  Students will assist in working through example 1.  Students will work through the rest of the reflections and rotations with their group members. |  |
| Time: | **Assessment**:  The teacher will assess the students as they work through the examples.  The teacher will assign a worksheet that requires students to use translations, reflections, rotations. |  |
| Time:  5 min | **Closure/Wrap Up:**  The student will remind students of translations and go over the results of the matrix multiplication with the students. |  |
|  | **Reflection:** |  |